

ATMOSPHERIC ELECTRICITY.

GENERAL STATISTICS.

The table on page 213 shows in detail for May, 1894, the number of stations from which meteorological reports were received, and the number of such stations reporting thunderstorms (T) and auroras (A) in each State and on each day of the month.

THUNDERSTORMS.

A mention of the more severe thunderstorms reported during the month is given under "Local storms." The dates on which reports of thunderstorms were most numerous were the 5th, 202; 6th, 234; 14th, 169; 17th, 208; 18th, 274; 28th, 169.

The States from which the reports of thunderstorms were most numerous were: Ohio, 329; Missouri, 234; North Caro-

lina, 219; Pennsylvania, 163; Wisconsin, 160; Minnesota, 152; Michigan, 151.

AURORAS.

The evenings on which bright moonlight must have interfered with observations of faint auroras are assumed to be the four days preceding and following the date of full moon, viz, from the 15th to the 23d, inclusive. On the remaining twenty-two days of the month 145 reports were received, or an average of 6 per day. The dates on which the reported number especially exceeded this average were the 27th (18), 28th (30), 29th (24), 30th (27). The States from which auroras were reported by a large percentage of observers were: Iowa, 8; Maine, 5; Michigan, 10; Minnesota, 34; Montana, 6; New Hampshire, 17; New York, 10; North Dakota, 23; South Dakota, 10; Wisconsin, 23.

INLAND NAVIGATION.

STAGE OF WATER IN RIVERS.

The following table shows the danger point and the highest and lowest stages for the month of May, 1894:

Heights of rivers above low-water mark, May, 1894.

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Height.	Date.	Height.	Date.	
<i>Red River.</i>	Feet.	Feet.		Feet.		Feet.
Shreveport, La.	29.2	29.8	15	18.2	1	11.6
<i>Arkansas River.</i>						
Fort Smith, Ark.	22.0	15.3	13	2.7	31	12.6
Little Rock, Ark.	23.0	17.6	3	5.6	31	12.0
<i>Missouri River.</i>						
Fort Buford, N. Dak.	25.0					
Bismarck, N. Dak.	75.0					
Pierre, S. Dak.	14.0					
Sioux City, Iowa	18.7	14.2	25	8.9	22	5.3
Omaha, Nebr.	18.0	13.4	26	8.4	22, 23	5.0
Kansas City, Mo.	21.0	16.7	28	10.0	23	6.7
<i>Mississippi River.</i>						
St. Paul, Minn.	14.0	11.8	21	7.4	31	4.4
La Crosse, Wis.	10.8	12.8	22	9.7	5-8	3.1
Dubuque, Iowa	16.0	15.5	27, 28	11.3	12	4.2
Davenport, Iowa	15.0	12.3	31	7.6	1	4.7
Keokuk, Iowa	14.0	10.9	11	6.9	1	4.0
Hannibal, Mo.	17.0	11.8	12, 13	7.3	1	4.5
St. Louis, Mo.	30.0	23.3	12	12.4	1	10.9
Cairo, Ill.	40.0	28.1	13	18.6	26	9.5
Memphis, Tenn.	33.0	20.9	16	12.5	29	8.4
Vicksburg, Miss.	41.0	35.8	1	24.4	31	11.4
New Orleans, La.	13.0	13.7	1-3	11.2	31	2.5
<i>Ohio River.</i>						
Parkersburg, W. Va.	38.0	25.9	24	5.5	18	20.4
Cincinnati, Ohio	45.0	32.0	27	9.4	22	22.6
Louisville, Ky.	24.0	11.4	28	5.7	20, 21	5.7
<i>Cumberland River.</i>						
Nashville, Tenn.	40.0	15.6	26	4.5	8	11.1
<i>Tennessee River.</i>						
Chattanooga, Tenn.	33.0	7.1	25	3.2	11	3.9
Knoxville, Tenn.	29.0					
<i>Monongahela River.</i>						
Pittsburg, Pa.	22.0	22.5	22	2.6	14	19.9
<i>Savannah River.</i>						
Augusta, Ga.	32.6	11.7	9	6.2	31	5.5
<i>Willamette River.</i>						
Portland, Oregon	15.0	29.0	31	15.2	6, 7	13.8
<i>Susquehanna River.</i>						
Harrisburg, Pa.	17.0					
<i>Alabama River.</i>						
Montgomery, Ala.	48.0	5.8	17	1.4	30, 31	4.4
<i>James River.</i>						
Lynchburg, Va.	18.0	2.5	21, 22	0.5	16, 17	2.0
<i>Sacramento River.</i>						
Red Bluff, Cal.	22.0	5.3	15	3.6	25, 30, 31	1.7
Sacramento, Cal.	25.0	22.0	17	21.3	31	0.7
<i>Des Moines River.</i>						
Des Moines, Iowa	19.0	4.0	12-16	3.0	30, 31	1.0

FLOODS.

The above table shows that in the rivers here recorded the waters during May rose above the danger line at Shreveport, where the Red River was highest on the 15th; La Crosse, where the Mississippi was highest on the 22d; New Orleans, where the Mississippi was highest on the 1st, 2d, and 3d;

Pittsburg, where the Monongahela was slightly above the danger line on the 22d; Portland, Oreg., where the Willamette was above the danger line throughout the month, and 14 feet above on the 31st, constituting the most destructive flood on record.

The following additional dates of floods in rivers are summarized from special reports and newspapers:

Arkansas River.—Pueblo, Colo., 31st.
Snake River.—Idaho Falls, Idaho, 29th.
Patuxco River.—Baltimore, Hagerstown, and Williamsport, Md., 20th.
Mississippi River.—Minneapolis, Minn., 20th.
Allegheny River.—Olean, N. Y., 20th, higher than in 1889. Salamanca and Carrollton, N. Y., 21st.
Buffalo River.—Buffalo, N. Y., 20th, highest flood since 1890.
Canadaway Creek.—Dunkirk, N. Y., 20th, a cloud-burst at noon.
Chemung River.—Elmira, N. Y., 20th, rising rapidly; 21st, overflow.
Genesee River.—Danville, N. Y., 20th, rain for forty-eight hours; destruction to crops, \$500,000. Genesee, N. Y., damage, \$50,000; Avon, N. Y., \$5,000; Wellsville, N. Y., \$3,500. 21st, Rushford, Allegany Co., N. Y., flood equal to that of June, 1889; has rained incessantly since Thursday, 17th. Rochester, N. Y., 21st.
Oak Orchard Creek.—Medina, N. Y., 21st.
Lake Keuka.—Hammondsport, N. Y., 21st, wind, rain, lightning, and generally heavy rain for two days.
Lake Erie.—South Buffalo, N. Y., 20th.
Conemaugh River.—Johnstown, Pa., 21st, damage, \$125,000; highest at 3 a. m.
Juniata River.—Hollidaysburg, Pa., 20th; Newport, Pa., 21st. Cloud-burst at Kittanning Point Reservoir washed away part of the dam, adding to the flood in the upper Juniata. This flood has been exceeded only once in the history of the Juniata Valley.
Lehigh River.—Bethlehem, Pa., 20th.
Nicopeck Creek.—Hazleton, Pa., 20th, much farm land inundated.
Schuylkill River.—Pottstown, Reading, and Norristown, 20th.
Little Schuylkill River.—Tamaqua, Pa., 20th.
Scatara River.—Pine Grove, Pa., 20th.
Susquehanna, Schuylkill, Juniata, and Lehigh Rivers.—Flood of the 21st equals or exceeds that of 1889, and nearly equals that of the spring freshet of 1865.
Susquehanna River.—Harrisburg, Pa., 20th, river 10 feet 6 inches and rising 10 inches per hour; 21st, 8 p. m., 24 feet; 22d, reached highest point, 25 feet 5 inches, only 14 inches below the great flood of June 11, 1889. Williamsport, Pa., 20th, great lumber boom broke and 150,000,000 feet of logs swept away; damage, \$7,000,000. Havre de Grace, Md., 20th.
Tuna River.—Bradford, Pa., 20th, steady rain for four days; estimated loss, \$150,000.
Black River.—Black River Falls, Wis., 16th.
Chippewa River.—Chippewa Falls, Wis., 15th, loss, \$200,000. Chippewa City, Wis., almost entirely washed out, with 6,000,000 feet of logs; river 10 feet above low water mark. Eau Claire, Wis., 16th, heavy rain; in the Chippewa Valley alone estimated damage, \$2,000,000.
Willow River.—Hudson, Wis., 17th, river to-day highest ever known; damage, about \$150,000.
Fraser River.—Vancouver, B. C., 30th, rose 10 inches to-night; 3 inches above the highest historical mark; valley inundated for 100 miles; loss, fully \$3,000,000.